BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name:	Riverside City - WQCP	Analytical Report:	Page 1 of 1
Contact:	Kevin Sudds	Project Name:	RWQCP-NPDES (BioSolid)
Address:	5950 Acorn St. Riverside, CA, 92504	Project Number:	NPDES
		Work Order Number:	**B9G0986**
Report Date:	12-Aug-2019	Received on Ice (Y/N)	Yes Temp: 4 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

Lab Sample #	Client Sample ID	Matrix	Date Sampled	By	Date Submitted	By
B9G0986-01	Biosolids	Sludge	7/8/19 10:00	Client	7/8/19 16:10	Mike Lazo

Note: Requested Dioxin was subcontracted to Maxxam Analytics.

Hexavalent Chromium analysis was subcontracted to Eurofins CalScience.

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Tania D. Huizar For Amanda C. Porter

e-Case Narrative+ COC.rpt

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

P 951 653 3351
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CA ELAP No. 2698
EPA No. CA00102
NELAP No.OR4035
LACSD No., 10119

BABCOCK Laboratories, Inc.
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Client Name:	Riverside City - WQCP	Analytical Report:	Page 1 of 2
Contact:	Kevin Sudds	Project Name:	RWQCP-NPDES (BioSolid)
Address:	5950 Acorn St. Riverside, CA, 92504	Project Number:	NPDES
		Work Order Number:	**B9G0986**

Report Date: 12-Aug-2019 Received on Ice (Y/N) Yes Temp: 4 °C

E.S. Babcock & Sons, Inc. Environmental Laboratories
(951) 653-3351 FAX (951) 653-1662
www.babcocklabs.com

Chain of Custody & Sample Information Record

Client: Riverside City-WQCP Contact: Anicia Yambot Phone No. (951)351-6016
FAX No. Email: AYambot@riversideca.gov
Project Name: NPDES Turn Around Time: Routine *3-5 Day *48 Hour Rush *24 Hour Rush Rush
Project Location: RWQCP *Lab TAT Approval: By: *Additional Charges May Apply
Additional Reporting Requests: Include QC Data Package: ☐ Yes ☐ No; FAX Results: ☐ Yes ☐ No; Email Results: ☐ Yes ☐ No; State EDT: ☐ Yes ☐ No (Include Source Number in Notes)

Sampler Information: Name: Employer: Signature:

Sample ID	Date	Time	# of Containers & Preservatives: Unpreserved	H2SO4	HCl	HNO3	Na2S2O3	NaOH	NaOH/ZnAcetate	NH4Cl	MCAA	Total # of Containers	Sample Type: Routine	Resample	Special	Analysis Requested: EPA Priority Pollutants Attach G	Matrix	Notes
Biosolids	7/9/19	10:30	X									6	X			X	SG	Analyze for all EPA priority pollutants in Attachment G including 2,3,7,8-TCDD and Total Cyanide

Matrix: DW = Drinking Water; WW = Wastewater; GW = Grcundwater; S = Soil; SG = Sludge; L = Liquid; M = Miscellaneous

Notes: Jars all have different times @

Sample date 7/9/19 on bottles

Relinquished By (sign)	Print Name / Company	Date / Time	Received By (Sign)	Print Name / Company
Mike Lazo	Mike Lazo / RWQCP	7/8/19 13:10		

(For Lab Use Only) Sample Integrity Upon Receipt

Sample(s) Submitted on Ice?	Yes	No	Temperature	
Custody Seal(s) Intact?	Yes	No N/A	4	°C
Sample(s) Intact?	Yes	No	Cooler Blank	IGD

Lab Notes

B9G0986
Rc'd: 07/08/2019 16:10
nsg

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
Riverside, CA 92507-0704

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BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: Riverside City - WQCP
Contact: Kevin Sudds
Address: 5950 Acorn St.
Riverside, CA, 92504

Analytical Report: Page 2 of 2
Project Name: RWQCP-NPDES (BioSolid)
Project Number: NPDES
Work Order Number: B9G0986

Report Date: 12-Aug-2019

Received on Ice (Y/N) Yes Temp: 4 °C

RWQCP (2013 PERMIT)
SEMI-ANNUAL PRESERVATION CHECKLIST
Every January and July

ATTACHMENT "G"

Metals	Acid Extractibles	Base/Neutral Extractibles (continuation)
1. Antimony	45. 2-Chlorophenol	91. Hexachloroethane
2. Arsenic	46. 2,4-Dichlorophenol	92. Indeno (1,2,3-cd) Pyrene
3. Beryllium	47. 2,4-Dimethylphenol	93. Isophorone
4. Cadmium	48. 2-Methyl-4,6-Dinitrophenol	94. Naphthalene
5a. Chromium (III)	49. 2,4-Dinitrophenol	95. Nitrobenzene
5b. Chromium (VI)	50. 2-Nitrophenol	96. N-Nitrosodimethylamine
6. Copper	51. 4-Nitrophenol	97. N-Nitrosodi-N-Propylamine
7. Lead	52. 3-Methyl-4-Chlorophenol	98. N-Nitrosodiphenylamine
8. Mercury	53. Pentachlorophenol	99. Phenanthrene
9. Nickel	54. Phenol	100. Pyrene
10. Selenium	55. 2, 4, 6 – Trichlorophenol	101. 1,2,4-Trichlorobenzene
11. Silver		
12. Thallium	**Base/Neutral Extractibles**	**Pesticides**
13. Zinc	56. Acenaphthene	102. Aldrin
	57. Acenaphthylene	103. Alpha BHC
Miscellaneous	58. Anthracene	104. Beta BHC
14. Cyanide	59. Benzidine	105. Delta BHC
15. Asbestos (not required unless requested)	60. Benzo (a) Anthracene	106. Gamma BHC
16. 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61. Benzo (a) Pyrene	107. Chlordane
	62. Benzo (b) Fluoranthene	108. 4, 4' - DDT
Volatile Organics	63. Benzo (g,h,i) Perylene	109. 4, 4' - DDE
17. Acrolein	64. Benzo (k) Fluoranthene	110. 4, 4' - DDD
18. Acrylonitrile	65. Bis (2-Chloroethoxy) Methane	111. Dieldrin
19. Benzene	66. Bis (2-Chloroethyl) Ether	112. Alpha Endosulfan
20. Bromoform	67. Bis (2-Chloroisopropyl) Ether	113. Beta Endosulfan
21. Carbon Tetrachloride	68. Bis (2-Ethylhexyl) Phthalate	114. Endosulfan Sulfate
22. Chlorobenzene	69. 4-Bromophenyl Phenyl Ether	115. Endrin
23. Chlorodibromomethane	70. Butylbenzyl Phthalate	116. Endrin Aldehyde
24. Chloroethane	71. 2-Chloronaphthalene	117. Heptachlor
25. 2-Chloroethyl Vinyl Ether	72. 4-Chlorophenyl Phenyl Ether	118. Heptachlor Epoxide
26. Chloroform	73. Chrysene	119. PCB 1016
27. Dichlorobromomethane	74. Dibenzo (a,h) Anthracene	120. PCB 1221
28. 1,1-Dichloroethane	75. 1,2-Dichlorobenzene	121. PCB 1232
29. 1,2-Dichloroethane	76. 1,3-Dichlorobenzene	122. PCB 1242
30. 1,1-Dichloroethylene	77. 1,4-Dichlorobenzene	123. PCB 1248
31. 1,2-Dichloropropane	78. 3,3'-Dichlorobenzidine	124. PCB 1254
32. 1,3-Dichloropropylene	79. Diethyl Phthalate	125. PCB 1260
33. Ethylbenzene	80. Dimethyl Phthalate	126. Toxaphene
34. Methyl Bromide	81. Di-n-Butyl Phthalate	
35. Methyl Chloride	82. 2,4-Dinitrotoluene	
36. Methylene Chloride	83. 2-6-Dinitrotoluene	
37. 1,1,2,2-Tetrachloroethane	84. Di-n-Octyl Phthalate	
38. Tetrachloroethylene	85. 1,2-Dipenylhydrazine	
39. Toluene	86. Fluoranthene	
40. 1,2-Trans-Dichloroethylene	87. Fluorene	
41. 1,1,1-Trichloroethane	88. Hexachlorobenzene	
42. 1,1,2-Trichloroethane	89. Hexachlorobutadiene	
43. Trichloroethylene	90. Hexachlorocyclopentadiene	
44. Vinyl Chloride		

G:\Sewer\DeptCommon\LAB_COMMON\LABFORMS\PRESERVATION CHECK LISTS\CURRENT Pres Chklist_31July2018

Date Printed: 7/1/2019

mailing
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CA ELAP No. 2698
EPA No. CA00102
NELAP No.OR4035
LACSD No., 10119

Denali_007469

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-1345-1
Client Project/Site: B9G0986

For:
Babcock Laboratories, Inc.
6100 Quail Valley Court
Riverside, California 92507

Attn: Amanda Porter

Authorized for release by:
7/23/2019 2:32:40 PM

Carla Hollowell, Project Manager I
(714)895-5494
carlahollowell@eurofinsus.com

Table of Contents

Client: Babcock Laboratories, Inc.
Job ID: 570-1345-1
Project/Site: B9G0986

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

Job ID: 570-1345-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-1345-1

Comments
No additional comments.

Receipt
The sample was received on 7/10/2019 9:50 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

General Chemistry
Method(s) 7196A: The Insoluble matrix spike / Insoluble matrix spike duplicate (MSI/MSID) recoveries for the following sample associated with preparation batch 570-6478 and analytical batch 570-6895 were outside control limits: (570-1270-A-25-H), (570-1270-A-25-F MSI ^25), (570-1270-A-25-I MSID ^25), (570-1686-B-1-A), (570-1686-B-1-H MSI ^25) and (570-1686-B-1-I MSID ^25). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

General Chemistry

Client Sample ID: B9G0986-01
Date Collected: 07/08/19 10:00
Date Received: 07/10/19 09:50

Lab Sample ID: 570-1345-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.784		mg/Kg		07/21/19 13:00	07/21/19 20:06	1

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 570-6478/1-A
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.797		mg/Kg		07/21/19 13:00	07/21/19 19:44	1

Lab Sample ID: LCS 570-6478/2-A
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.1	17.54		mg/Kg		87	78 - 120

Lab Sample ID: LCSD 570-6478/3-A
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	20.0	17.73		mg/Kg		89	78 - 120	1	20

Lab Sample ID: 570-1686-B-1-F MS
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND	F1	20.1	19.29		mg/Kg		96	75 - 125

Lab Sample ID: 570-1686-B-1-G MSD
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND	F1	20.1	19.23		mg/Kg		95	75 - 125	0	25

Lab Sample ID: 570-1686-B-1-H MSI ^25
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	ND	F1	984	611.2	F1	mg/Kg		62	75 - 125

Lab Sample ID: 570-1686-B-1-I MSID ^25
Matrix: Solid
Analysis Batch: 6895

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 6478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSID Result	MSID Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	ND	F1	961	639.0	F1	mg/Kg		67	75 - 125	4	25

QC Association Summary

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

General Chemistry

Prep Batch: 6478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-1345-1	B9G0986-01	Total/NA	Solid	3060A	
MB 570-6478/1-A	Method Blank	Total/NA	Solid	3060A	
LCS 570-6478/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSD 570-6478/3-A	Lab Control Sample Dup	Total/NA	Solid	3060A	
570-1686-B-1-F MS	Matrix Spike	Total/NA	Solid	3060A	
570-1686-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	3060A	
570-1686-B-1-H MSI ^25	Matrix Spike	Total/NA	Solid	3060A	
570-1686-B-1-I MSID ^25	Matrix Spike Duplicate	Total/NA	Solid	3060A	

Analysis Batch: 6895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-1345-1	B9G0986-01	Total/NA	Solid	7196A	6478
MB 570-6478/1-A	Method Blank	Total/NA	Solid	7196A	6478
LCS 570-6478/2-A	Lab Control Sample	Total/NA	Solid	7196A	6478
LCSD 570-6478/3-A	Lab Control Sample Dup	Total/NA	Solid	7196A	6478
570-1686-B-1-F MS	Matrix Spike	Total/NA	Solid	7196A	6478
570-1686-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	7196A	6478
570-1686-B-1-H MSI ^25	Matrix Spike	Total/NA	Solid	7196A	6478
570-1686-B-1-I MSID ^25	Matrix Spike Duplicate	Total/NA	Solid	7196A	6478

Lab Chronicle

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

Client Sample ID: B9G0986-01
Date Collected: 07/08/19 10:00
Date Received: 07/10/19 09:50

Lab Sample ID: 570-1345-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.55 g	100 mL	6478	07/21/19 13:00	UAPD	ECL 1
Total/NA	Analysis	7196A		1	100 mL	100 mL	6895	07/21/19 20:06	UAPD	ECL 1
	Instrument ID: UV9									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Babcock Laboratories, Inc.
Job ID: 570-1345-1
Project/Site: B9G0986

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arizona	State Program	9	AZ0781	03-13-20
California	SCAQMD LAP	9	N/A	11-30-19
California	State Program	9	2944	09-30-19
Guam	State Program	9	19-004R	10-31-19
Hawaii	State Program	9	N/A	01-29-20
Nevada	State Program	9	CA00111	07-31-19
Oregon	NELAP Primary AB	10	CA300001	01-20-20
Washington	State Program	10	C916	10-11-19

Method Summary

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

Method	Method Description	Protocol	Laboratory
7196A	Chromium, Hexavalent	SW846	ECL 1
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	ECL 1

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Babcock Laboratories, Inc.
Project/Site: B9G0986

Job ID: 570-1345-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-1345-1	B9G0986-01	Solid	07/08/19 10:00	07/10/19 09:50	

570-1345 Chain of Custody

SUBCONTRACT ORDER

Printed: 7/9/2019 11:29

Babcock Laboratories, Inc.

B9G0986

SENDING LABORATORY:

Babcock Laboratories, Inc.
6100 Quail Valley Court
Riverside, CA 92507-0704
Phone: (951) 653-3351
Fax: (951) 653-1662
Project Manager: Amanda C. Porter

RECEIVING LABORATORY:

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone :(714) 895-5494
Fax: (714) 894-7501

System Name: Riverside City- WQCP
Sampler: Client

Analysis	Due	Expires Regulatory Days Past Date Sampled	Laboratory ID	Comments
Sample ID: B9G0986-01 **Sludge**		**Sampled: 07/08/19 10:00**	**Biosolids**	***Proj.No.:*NPDES**
Cr-6-Subout	07/22/19 23:59	08/05/19 10:00		
Containers Supplied: 8 oz. jar (B)				

All Containers Intact: _____ Yes _____No Samples Preserved Properly: _____Yes _____No

Samples Received at _____ oC Sample Labels / COC Agree: _____Yes _____No Custody Seals Present: _____Yes _____No

Please forward all acknowledgements of sample receipt, final reports and invoices to data@babcocklabs.com
NO HARDCOPIES PLEASE.

Violette Smith 7/9/19 — 7/10/19 0950

Released By / Date / Received By / Date

Released By / Date / Received By / Date

(Fedex) 5.4/5.6 SC6

ORIGIN ID:ONTA (951) 653 3351
BABCOCK LABORATORIES
6100 QUAIL VALLEY CT
RIVERSIDE, CA 92507
UNITED STATES US

SHIP DATE: 09JUL19
ACTWGT: 8.60 LB MAN
CAD: 0266194/CAFE3211
DIMS: 14x14x12 IN
BILL SENDER

TO SAMPLE RECEIVING
EUROFINS CALSCIENCE, INC.
7440 LINCOLN WAY

GARDEN [illegible] CA 92841

WED - 10 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 1087 1373 2041

92 APVA

92841
CA-US SNA

(Fedex)

Login Sample Receipt Checklist

Client: Babcock Laboratories, Inc.

Job Number: 570-1345-1

Login Number: 1345
List Number: 1
Creator: Castro, Joy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Your Project #: B9G0986
Your C.O.C. #: N/A

Attention: Amanda Porter

BABCOCK LABS
PO BOX 432
RIVERSIDE, CA
USA 92502-0432

Report Date: 2019/08/09
Report #: R5831745
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9J6475
Received: 2019/07/17, 13:40

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Dioxins/Furans in Soil (1613B) (1)	1	2019/07/30	2019/08/04	BRL SOP-00410	EPA 1613B m
Moisture	1	N/A	2019/07/18	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.
U = Undetected at the limit of quantitation.
J = Estimated concentration between the EDL & RDL.
B = Blank Contamination.
Q = One or more quality control criteria failed.
E = Analyte concentration exceeds the maximum concentration level.
K = Estimated maximum possible concentration due to ion abundance ratio failure.

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Your Project #: B9G0986
Your C.O.C. #: N/A

Attention: Amanda Porter

BABCOCK LABS
PO BOX 432
RIVERSIDE, CA
USA 92502-0432

Report Date: 2019/08/09
Report #: R5831745
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9J6475
Received: 2019/07/17, 13:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Stephanie Pollen, Project Manager
Email: Stephanie.Pollen@bvlabs.com
Phone# (905)817-5830

==========

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RESULTS OF ANALYSES OF SOIL

BV Labs ID		KHD752		
Sampling Date		2019/07/08 10:00		
	UNITS	B9G0986-01	RDL	QC Batch
Inorganics				
Moisture	%	84	1.0	6234661

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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DIOXINS AND FURANS BY HRMS (SOIL)

BV Labs ID		KHD752						
Sampling Date		2019/07/08 10:00						
COC Number		N/A			TOXIC EQUIVALENCY		# of	
	UNITS	B9G0986-01	EDL	RDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch
Dioxins & Furans								
2,3,7,8-Tetra CDD *	pg/g	5.55	0.767	4.77	1.00	5.55	N/A	6262076
TOTAL TOXIC EQUIVALENCY	pg/g	N/A	N/A	N/A	N/A	5.55	N/A	N/A
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	113	N/A	N/A	N/A	N/A	N/A	6262076
C13-2378 TetraCDD *	%	96	N/A	N/A	N/A	N/A	N/A	6262076

EDL = Estimated Detection Limit

RDL = Reportable Detection Limit

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin

N/A = Not Applicable

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TEST SUMMARY

BV Labs ID: KHD752
Sample ID: B9G0986-01
Matrix: Soil

Collected: 2019/07/08
Shipped:
Received: 2019/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	6262076	2019/07/30	2019/08/04	Angel Guerrero
Moisture	BAL	6234661	N/A	2019/07/18	Min Yang

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.8°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
6234661	GYA	RPD - Sample/Sample Dup	Moisture	2019/07/18	10		%	20
6262076	AGU	Matrix Spike	37CL4 2378 Tetra CDD	2019/08/06		100	%	35 - 197
			C13-2378 TetraCDD	2019/08/06		89	%	25 - 164
			2,3,7,8-Tetra CDD	2019/08/06		107	%	67 - 158
6262076	AGU	Spiked Blank	37CL4 2378 Tetra CDD	2019/08/06		68	%	35 - 197
			C13-2378 TetraCDD	2019/08/06		59	%	25 - 164
			2,3,7,8-Tetra CDD	2019/08/06		82	%	67 - 158
6262076	AGU	Method Blank	37CL4 2378 Tetra CDD	2019/08/06		73	%	35 - 197
			C13-2378 TetraCDD	2019/08/06		23 (1)	%	25 - 164
			2,3,7,8-Tetra CDD	2019/08/06	0.131 U, EDL=0.131		pg/g	
6262076	AGU	RPD - Sample/Sample Dup	2,3,7,8-Tetra CDD	2019/08/04	NC		%	25

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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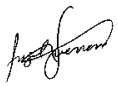
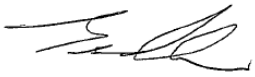
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Angel Guerrero, Team Leader, VOC Air



Brad Newman, Scientific Service Specialist

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Confirmation of Sample Receipt

BV Labs Job Number: B9J6475
Job Received: 2019/07/17 13:40
Final Report Due: 2019/07/31 18:00

Invoice Information

Attn: (AP) DeAnna Tillman
BABCOCK LABS
PO BOX 432
RIVERSIDE, CA, 92502-0432
Email to:
dtillman@babcocklabs.com

Report Information

Attn: Amanda Porter
BABCOCK LABS
PO BOX 432
RIVERSIDE, CA, 92502-0432
Email to:
aporter@babcocklabs.com
data@babcocklabs.com

Project Information

Quote #: B82508
PO/AFE#:
Project #: B9G0986
Site Location:
Sampled By:

Analytical Summary

A: Due On 2019/07/31 18:00

Lab ID	Client Sample ID	Sampling Date/Time	Matrix	Dioxin/Furan Full List (8290/1613)
COC# N/A				
KHD752	B9G0986-01	2019/07/08 10:00	SLDG	A

Include Criteria on CofA: No

Sample Inspection Observations & Comments

# of Samples Received: 1

Details: Sample(s) received in good condition.

Average Temperature: Package 1: 2.8 °C

Additional Notes

- Unless special storage arrangements are made, all samples will be disposed 30 days after receipt. Additional fees may be applied for extended storage.
- Additional fees may be applied for the disposal of hazardous samples.

The contents of this report are subject to change. For up to date information, please refer to the Customer Portal.

Confirmation of Sample Receipt

BV Labs Job Number: B9J6475
Job Received: 2019/07/17 13:40
Final Report Due: 2019/07/31 18:00

Parameter Summary

Package/Test	Parameter	RDL *	Unit	Samples
Dioxin/Furan Full List (8290/1613)	Confirmation 2,3,7,8-Tetra CDF	0.1	pg/g	All
	2,3,7,8-Tetra CDD	10	pg/g	All
	1,2,3,7,8-Penta CDD	50	pg/g	All
	1,2,3,4,7,8-Hexa CDD	50	pg/g	All
	1,2,3,6,7,8-Hexa CDD	50	pg/g	All
	1,2,3,7,8,9-Hexa CDD	50	pg/g	All
	1,2,3,4,6,7,8-Hepta CDD	50	pg/g	All
	Octa CDD	100	pg/g	All
	Total Tetra CDD	10	pg/g	All
	Total Penta CDD	50	pg/g	All
	Total Hexa CDD	50	pg/g	All
	Total Hepta CDD	50	pg/g	All
	2,3,7,8-Tetra CDF	10	pg/g	All
	1,2,3,7,8-Penta CDF	50	pg/g	All
	2,3,4,7,8-Penta CDF	50	pg/g	All
	1,2,3,4,7,8-Hexa CDF	50	pg/g	All
	1,2,3,6,7,8-Hexa CDF	50	pg/g	All
	2,3,4,6,7,8-Hexa CDF	50	pg/g	All
	1,2,3,7,8,9-Hexa CDF	50	pg/g	All
	1,2,3,4,6,7,8-Hepta CDF	50	pg/g	All
	1,2,3,4,7,8,9-Hepta CDF	50	pg/g	All
	Octa CDF	100	pg/g	All
	Total Tetra CDF	10	pg/g	All
	Total Penta CDF	50	pg/g	All
	Total Hexa CDF	50	pg/g	All
	Total Hepta CDF	50	pg/g	All
	Moisture	1	%	All

**RDLs are subject to change based on interferences present at the time of analysis.*

BV Labs PM: Stephanie Pollen (Stephanie.Pollen@bvlabs.com or 905-817-5830)

AIR

SUBCONTRACT ORDER Printed: 7/9/2019 11:29

Babcock Laboratories, Inc.

B9G0986

SENDING LABORATORY:

Babcock Laboratories, Inc.
6100 Quail Valley Court
Riverside, CA 92507-0704
Phone: (951) 653-3351
Fax: (951) 653-1662
Project Manager: Amanda C. Porter

RECEIVING LABORATORY:

Maxxam Analytics, Inc. - Burlington
931 Bailey Ave.
Buffalo, NY 14206
Phone :(800) 668-0639
Fax: -

System Name: Riverside City- WQCP
Sampler: Client

Analysis	Due	Expires Regulatory Days Past Date Sampled	Laboratory ID	Comments
Sample ID: B9G0986-01 **Sludge**		**Sampled: 07/08/19 10:00**	**Biosolids**	***Proj.No.:NPDES***
Dioxin	07/22/19 23:59	08/05/19 10:00	J Flag. NEEDS 10 DAY TAT	
Containers Supplied: 8 oz. jar (A)				

International Solid Sample
Heat Treat Required
High Risk material
Controlled Storage and Disposal

17-Jul-19 13:40
Stephanie Pollen
B9J6475
JCC ENV-598

All Containers Intact: ____ Yes ____No Samples Preserved Properly: ____Yes ____No

Samples Received at ____ oC Sample Labels / COC Agree: ____Yes ____No Custody Seals Present: ____Yes ____No

9.0/7.0/7.4

Please forward all acknowledgements of sample receipt, final reports and invoices to data@babcocklabs.com URE 2019/07/17

NO HARDCOPIES PLEASE.

Released By Date Received By Date

Michelle Smith 7/15/19 Roger/Rogers/Signed 2019/07/17 17:40

Released By Date Received By Date

Page 1 of 1